Army Substance Abuse Program

Fort Jackson, S.C.

ARMY SUBSTANCE ABUSE PROGRAM (ASAP)

Civilian Employee Prevention and Training Part Three

MARIJUAN

Marijuana
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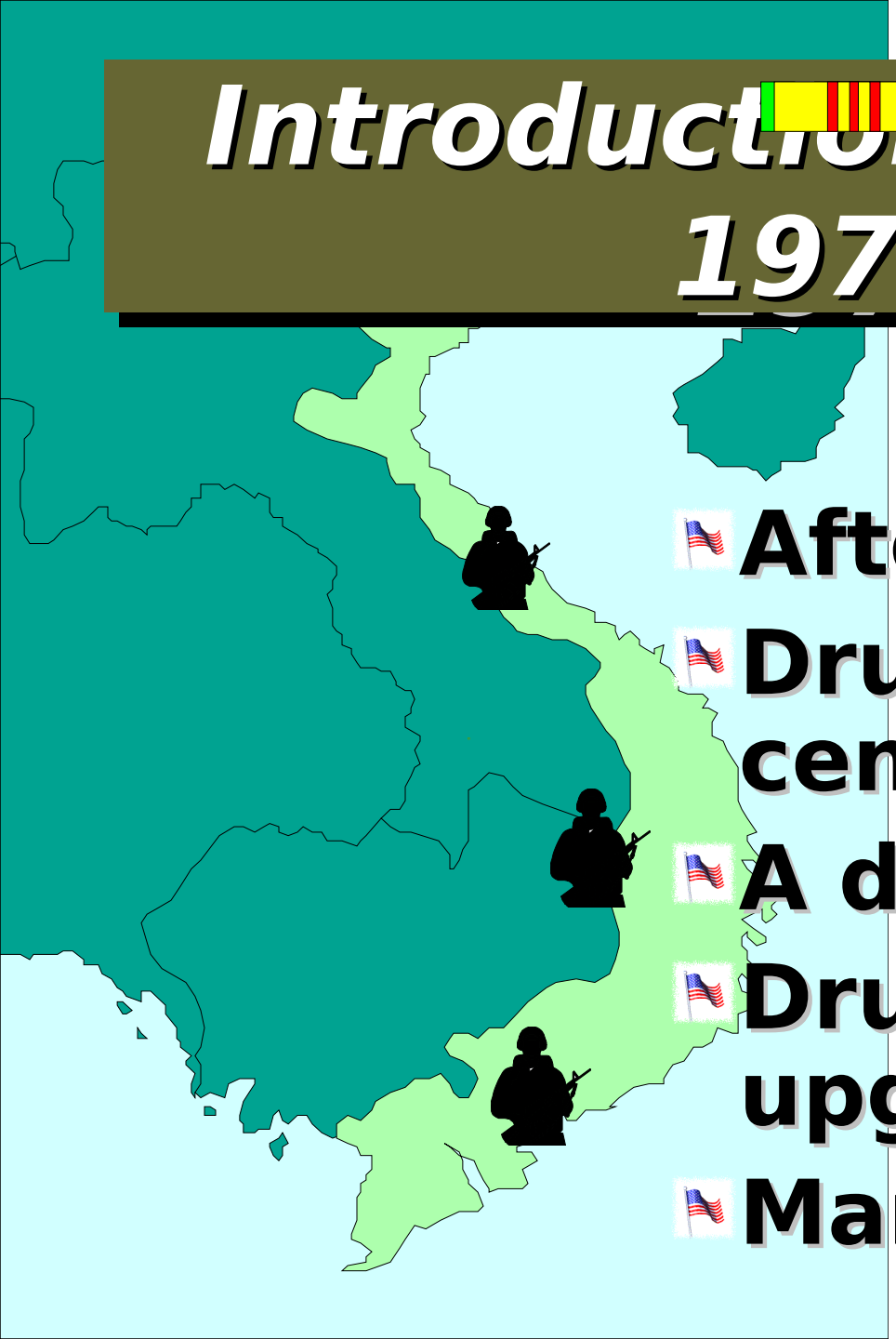
THC (MARIJUANA)

- *Introduction*
- *Marijuana Pharmacology & Effects*
- *Testing for marijuana*

INTRODUCTION

- **Marijuana is still the #1 illicit drug of choice in AMERICA**
- **Marijuana is considered to be a gateway drug to other drug use and abuse.**
- **Army Drug Policy – "ZERO TOLERANCE"**

Introduction: 1960's – 1970's



- Aftermath of Vietnam
- Drug treatment centers opened.
- A decade of change
- Drug screening labs upgraded to forensic
- Mandatory urinalysis

Introduction: War on Drugs

- **1980 33% Of The Military Reported Illicit Drug Use**
- **1981 - U.S.S. NIMITZ Crash of Marine Corps EA-6B**
- **Autopsies Of Killed Sailors And Marines Revealed THC in Six Bodies**
- **DOD Declared “War On Drugs.”**

Introduction: Attitudes

- **Shifting attitudes among parents of today's generation who themselves used marijuana in the 60’s -70’s.**

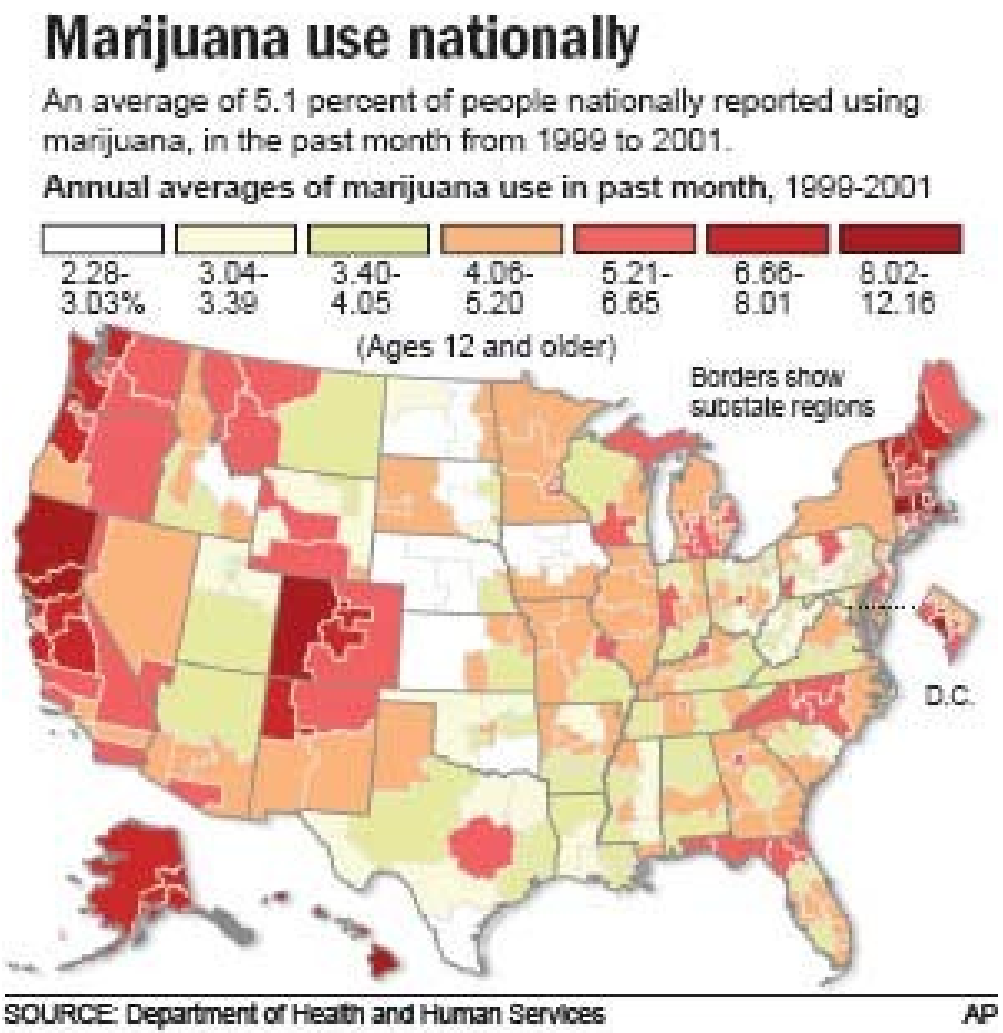
Introduction: Trends

- More intense patterns of marijuana abuse such as “Blunt” marijuana cigars.
- Changes in public perception about marijuana as reflected by open use of the drug in film, media, musical recordings and rock or rap videos.
- $$ Marijuana can sell for $600 an ounce, $8,000 a pound, $20 for a blunt cigar.

Introduction: Trends

- Pulmonary risks of smoking marijuana are often ignored.
- Addiction is associated with alcohol and other drugs – not marijuana.
- THC is psychologically addictive - abuse and addiction is frequently denied.

MARIJUANA USE IN THE U.S.



Pharmacology Of Marijuana

- Marijuana is a psychoactive or mind altering drug.
- Psychoactive drugs can produce a mind state similar to psychosis.
  - **Psychosis** - A major mental disorder in which the personality is very seriously disorganized.

Pharmacology Of Marijuana

- Marijuana is the term used in the U.S. to refer to the cannabis plant.
- Delta 9 – Tetrahydrocannabinol (THC)

  is the active ingredient that causes the “high”.
- THC is much stronger today than in the 1960’s:
  - 1% THC content in 1960’s
  - 3 – 28% today

Pharmacology Of Marijuana

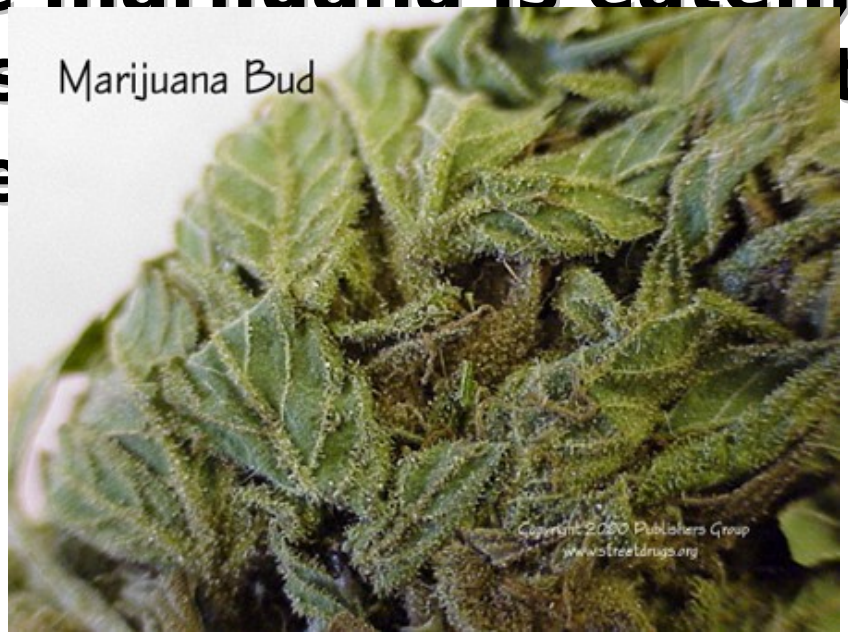
- Recent domestic report revealed 29.86% THC content.
- Much more dangerous today.
- Mixing other drugs with THC by drug dealers and users.

Three Basic Forms

- **Marijuana** - Made from the leaves, flowers or stems of the hemp plant.
- **Hash/Hashish** - Concentrated form of marijuana by compressing marijuana resins into small blocks.
- **Hash Oil** - Made by soaking marijuana in a chemical solvent (such as rubbing alcohol) and then evaporating the solvent to obtain an oil concentrate.

Pharmacology

- When smoked, the marijuana is absorbed through the capillaries in the lungs.
- When the mariiuana is eaten, the chemicals the small inte



Acute Effects

- Euphoria
- Short Term Memory Loss
- Increased Appetite
- Bloodshot Eyes
- Dry Mouth/Throat
- Sleepiness

- Increased Heart Rate
- Loss of Coordination
- Paranoia
- Hallucinations
- Chronic Panic Attacks
- Psychosis

Acute Effects

- **Marijuana smoke contains more tar and cancer causing substances than tobacco smoke.**
- **Smoking one joint = five cigarettes.**
- **With one puff you inhale 150 cancer - causing substances and twice as much tar as with tobacco.**

Acute Effects

- **Smoking marijuana can cause:**
  - **Bronchitis**
  - **Lung cancer**
  - **Brain damage**
- **Smoking marijuana causes some neurotransmitters to clump up and become inactive.**
- **Neurotransmitters send messages throughout the brain for body functions.**
- **Interferes with thinking, ability to focus, memory lapses.**

Long Term Effects – Male Specific

- **Reduces male hormone testosterone.**
- **Sex organs do not function properly.**
- **Reduces sperm count in adult males.**
- **Ages 10-20 is when male sex organs are maturing.**
- **Use can cause long-term negative affects on sex organs.**

Long Term Effects – Female Specific

- **Testosterone increases causing facial hair, more body hair and acne.**
- **Decreased sexual pleasure.**
- **Disrupts menstrual cycles and ovulation.**

POT SUCKERS

POT SUCKERS

- Marijuana-flavored lollipops with names such as Purple Haze, Acapulco Gold and Rasta are showing up on the shelves of convenience stores around the country.
- The confections are legal, because they are made with hemp oil, a common ingredient in health food, beauty supplies and other household products.
- The oil imparts marijuana’s grassy taste but not the high.

MARIJUANA TESTING

- MARIJUANA CAN BE DETECTED IN THE URINE FOR UP TO 45 DAYS.

COCAIN

WHAT IS COCAINE?

- *The Chemical Name for cocaine is benzoylmethylecognine.*
- *Cocaine is a bitter, white, odorless, crystalline drug.*
- *Cocaine is a Schedule II drug and is illegal to possess and sell in the United States.*
- *Cocaine is extracted and refined from the Coca Plant, which is grown primarily in the Andean region of South America.*

HISTORY of COCAINE

3000 B.C. The Coca Plant is believed to be a gift from God and Coca chewing is practiced throughout South America.

1662 Abraham Cowley writes a poem about Coca "A Legend of Coca". This is the first mention of the plant in English literature.

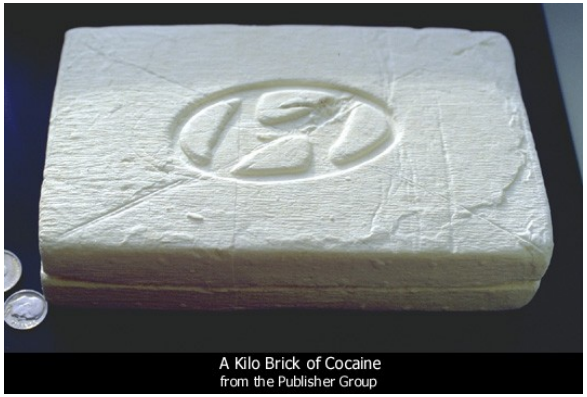
1708 Coca is first mentioned in a materia medica, Institutiones Medicae.

1850's Coca tinctures used in throat surgery.

1855 Cocaine is extracted from Coca leaves for the first time.

1862 Merck produces ¼ pound of cocaine.

HISTORY of COCAINE


A Kilo Brick of Cocaine
from the Publisher Group

1870 Coca wine is sold throughout the United States and France with an average of 7mg of cocaine per ounce of wine.

1870s Parke, Davis manufactures a fluid extract of Coca.

1883 Merck produces ¾ pound of cocaine.

1884 Cocaine is regularly used as an anesthetic in eye surgery.

1884 Sigmund Freud publishes an article in which he recommends the use of cocaine to treat morphine addiction.

1884 Merck produces 3,179

HISTORY of COCAINE

1886 Merck produces 158,352 pounds of cocaine.

1886 Coca Cola is first produced containing syrup and caffeine laced with cocaine.

1880s Parke, Davis manufacture refined cocaine.

1905 The consumption of cocaine via snorting begins to gain popularity.

1910 First cases of nasal damage due to snorting cocaine are seen in hospitals.

1912 Over 5,000 cocaine related deaths are reported in the United States.

HISTORY of COCAINE

1914 Cocaine is banned in the United States.

1976 Freebase cocaine (Crack) is first developed.

1980s Crack is popularized by dealers and glamorized by the Hollywood media.

1981 Wholesale cost of 1 kg of cocaine is $55,000.

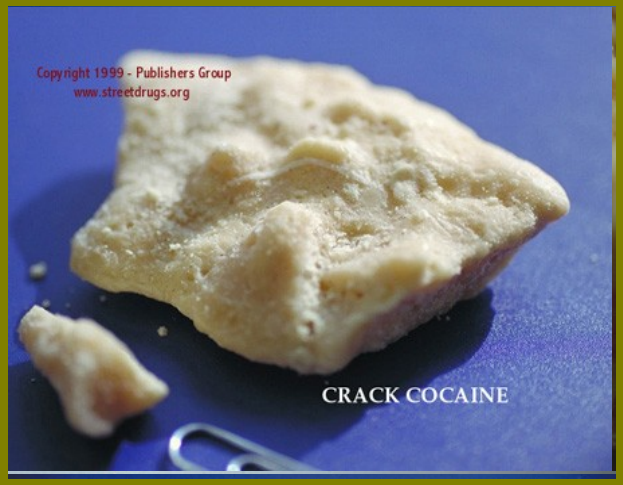
1984 Wholesale cost of 1 kg of cocaine is $25,000.

Mid 1980s Crack becomes the most addictive form of cocaine.

STREET NAMES

Cocaine can be found on the street using an infinite number of street names and slang:

- **DUST**
- **COKE**
- **FLAKES**
- **SNOW**
- **PEARL**
- **BLOW**
- **HEAVEN**
- **BLOKE**
- **CABELLO**
- **DREAM**
- **CRACK**
- **CANDY**



HOW IS COCAINE CONSUMED?

Cocaine can be snorted, injected, smoked, or eaten. The level and length of the effects depend on how the drug was induced.

	Onset	Duration
Snorted	*1 minute*	*20-40 Minutes*
Injected	*1-5 Seconds*	*15-20 Minutes*
Smoked	*Immediate*	*5-15 Minutes*

PHYSICAL EFFECTS

While even the purest cocaine is extremely dangerous, the cocaine that is purchased on the street is even more so as it is often quite impure. Physical side effects that have been known to accompany

- ***Decreased Appetite***
- ***Increased Body Temper***
- ***Increased Heart Rate***
- ***Dilated Pupils***
- ***Nausea/Vomiting***
- ***Severe Nose Damage – When Snorted***
- ***Violent Behavior***
- ***Kidney Failure***
- ***Seizure and/or Stroke***

PHYSIOLOGICAL EFFECTS

The physiological effects of cocaine vary more than the physical depending on the size of dose and user tolerance:

- ***Increased Alertness***
- ***Increases Athletic Performance***
- ***Decreased Fatigue***
- ***Increased Concentration***
- ***Insomnia***
- ***Increased Irritability***
- ***Increased Psychosis***

- ***Confused Behavior***
- ***Increased Fear***
- ***Extreme Paranoia***
- ***Anxiety Attacks***
- ***Hallucinations (in extreme cases)***
- ***Express Aggressive and Anti-social Behavior***

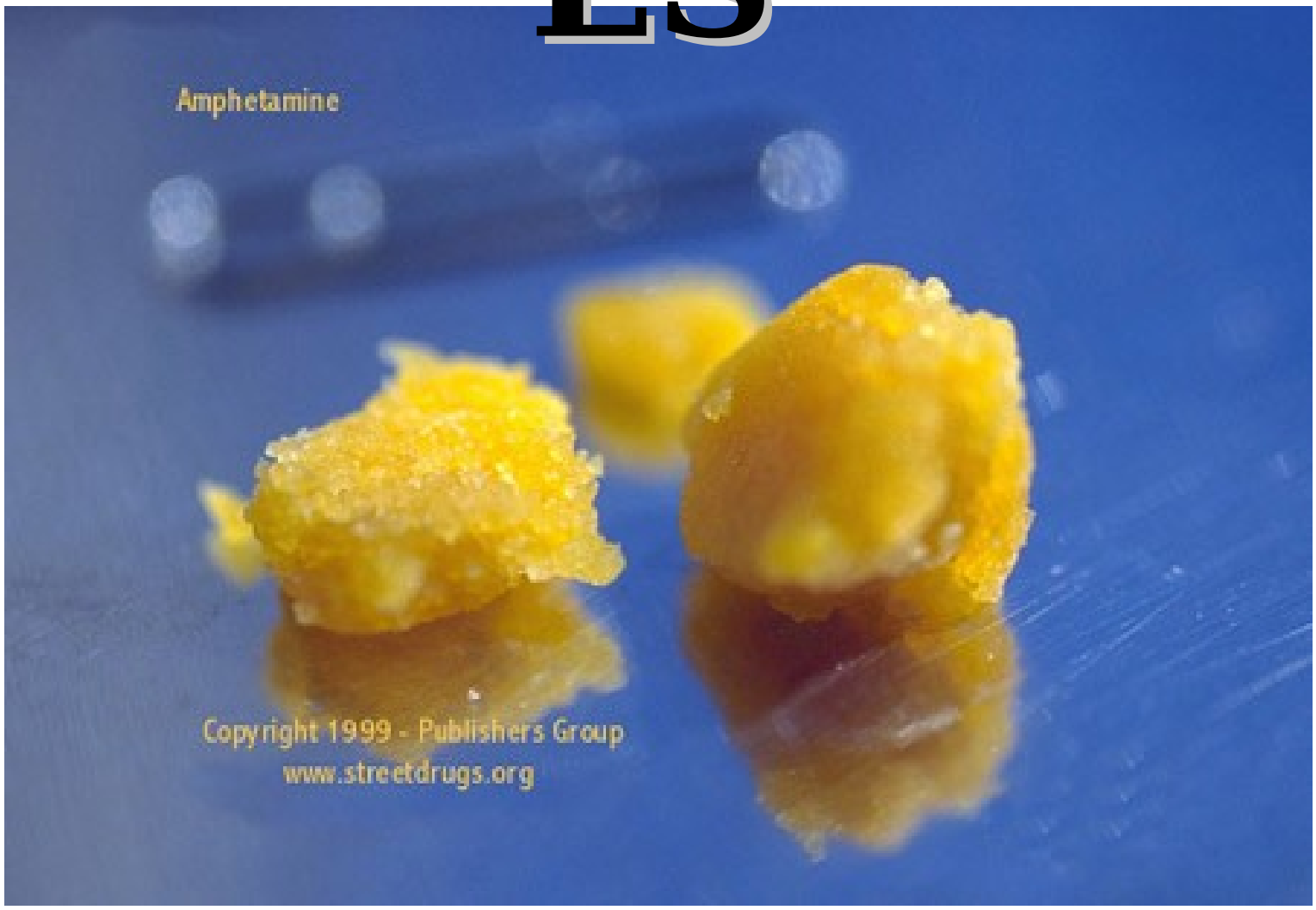
COCAINE TESTING

- ***Cocaine is tested for in ALL urinalysis specimen.***

- ***Cocaine is detectable in urine for 2-4 days after ingestion.***

AMPHETAMIN

AMPHETAMINES



AMPHETAMINES

WHAT ARE AMPHETAMINES?

- ***Amphetamines are powerful stimulants that increase activity in the Central Nervous System (CNS), or speed up the way the human body works.They are classified as a CNS Stimulant.***

- ***Amphetamines are drugs that induce false feelings of power, strength, self-assertion and enhanced motivation.***

HISTORY of AMPHETAMINES

18 JAN 1887 First amphetamine, phenylisopropylamine was synthesized by a German chemist.

1919 Methamphetamine is first synthesized.

1932 Amphetamines were marketed for the first time as benzedrine in an over-the-counter inhaler to treat congestion.

1937 Amphetamines were made available for prescription in tablet form to treat narcolepsy.

HISTORY of AMPHETAMINES

World War II ***Amphetamines are widely distributed to soldiers on both sides to enhance performance. This led to addiction problems in post war Japan.***

1942 ***Dextro-amphetamine becomes commonly available throughout the United States.***

1950s ***Amphetamines were widely used to treat depression and cause weight loss.***

1960s ***Methamphetamine use begins to appear around the United States.***

HISTORY of AMPHETAMINES

1970 ***Amphetamines became illegal after the passage of "United States Drug Abuse Regulation and Control Act of 1970"***

1980s – present ***The smoking of methamphetamine becomes popular throughout the United States despite the dangers involved.***

Present ***Amphetamines are classified by the DEA as a Schedule II Controlled Substance.***

Amphetamines, specifically methamphetamine has been associated with "Raves", and belongs to the "Club Drugs" family.

STREET NAMES

The amphetamines found on the street are almost never pure, and have been known to be mixed with substances such as glucose. Amphetamines are known by several slang terms such as:

Dexies

Black Beauties

Jollies

HOW ARE AMPHETAMINES CONSUMED?

Amphetamines are generally a white or off-white powder that can be ingested in one of three ways:

- **Orally – In a pill form**
- **Snorted – This can cause severe damage to the interior and exterior of the nose.**
- **Intravenously - The amphetamine can be injected into either the blood stream or the muscle tissue**

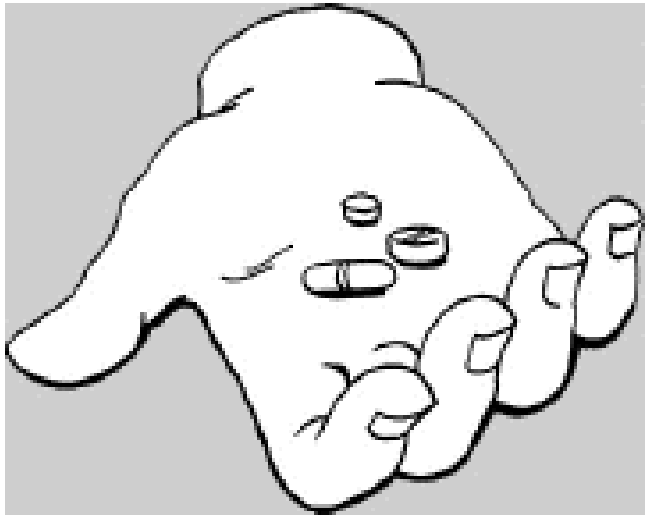
SHORT TERM SIDE EFFECTS

- Dilated Pupils
- Increased Blood Pressure
- Increased Heart Rate
- Decreased Appetite
- Dry Mouth
- Headache
- Tremors
- Dizziness/Nausea
- Irregular Heartbeat
- Loss of Coordination
- Collapse
- Loss of Consciousness

LONG TERM SIDE EFFECTS

In addition to those listed below amphetamine use can cause the users to have long term problems with high blood pressure, irregular heartbeats, and severe sleeping disorders.

Malnutrition **– Because Amphetamines reduce the users appetite, they are less likely to eat properly and because of this are less resistant to infections.**



Chronic Psychosis **– Symptoms include paranoia, delusions, and bizarre behavior. This can be seen as early as 1 week after the user has**

Chronic Anxiety/Tension **- To combat this users often turn to alcohol and barbiturates for help. Chronic Anxiety may also lead to violent behavior.**

Brain Damage **– Long term use of Amphetamines can cause damage to the brain, specifically areas that deal with memory and**

ADDICTION

Physical Dependence *- When the users body cannot function properly without ingestion of the drug.*

Psychological Dependence *- When the consumption of the drug takes priority over other activities within the users daily life.*

WITHDRAWAL

When a dependent person stops taking amphetamines their body must readjust to functioning with the drug. Symptoms of withdrawal can include:

- **Hunger**
- **Extreme Fatigue**
- **Anxiety/Irritability**
- **Chronic Depression**
- **Restless Sleep**
- **Severe Nightmares**
- **Severe Distress**
- **Panic Attacks**

AMPHETAMINE TESTING

- ***Amphetamines are detectable in urine for 2-4 days after ingestion.***

OPIATES

Thai Woman Smoking Opium
photo by John W. Allen

OPIATES

Small Packets of Heroin

Anonymous Photographer, © 2001 Erowid.org

WHAT ARE OPIATES?

- ***Opiates are drugs that are derived from the Poppy Plant and are Central Nervous System (CNS) depressants.***
- ***The most common opiates are:***
  - ***Opium***
  - ***Heroin***
  - ***Morphine***
  - ***Codeine***
- ***There are several synthetic opiates available, such as methadone, that were created as pain killers and to help treat heroin addiction.***

HISTORY of OPIATES

1903 ***Heroin addiction in the United States rises at an alarming rate.***

1905 ***U.S. Congress bans opium.***

1906 ***U.S. Congress passes the "Pure Food and Drug Act" which caused that availability and consumption of opiates to decline dramatically.***

1909 ***The first federal drug prohibition passes in the U.S., outlawing the importation of opium and opiates.***

1910 ***The Chinese convince Britain to dismantle the India-China opium trade.***

HISTORY of OPIATES

1914 ***The "Harrison Narcotics' Act" is passed which required all doctors and pharmacists that prescribed opiates to register with the government and pay a tax.***

1922 ***The "Narcotic Import and Export Act" is passed which restricted the importation of crude opium except for medicinal purposes.***

1923 ***The first federal drug agency, U.S. Treasury Department's Narcotic Division, is formed and all narcotic sales are banned.***

1924 ***The "Heroin Act" is passed and the manufacture, possession, and consumption of heroin is made illegal.***

1925 ***In the wake of the federal ban on opiates, a thriving black market opens in New York's Chinatown.***

HISTORY of OPIATES

1930s The majority of illegal opiates smuggled into the U.S. comes from China.

1945 Burma gains independence from Britain following WWII and opium cultivation flourishes in the surrounding areas.

1962 Burma outlaws the cultivation, possession and consumption of opiates.

1965-70 Opium and heroin smuggling into the U.S. is at an all time high. This is blamed in part on the U.S. involvement in the Vietnam War. An estimated 750,000 heroin addicts live in the United States.

HISTORY of OPIATES

1970 ***Controlled Substance Act is passed which divided drugs into categories and set penalties for crimes involving narcotics.***

Mid 1970s ***Heroin and Opiate use in the U.S. begins to subside. Mexican heroin enters the market and would remain a large player for almost a decade.***

1978 ***The U.S. and Mexican governments meet and decide on a way to eliminate the Opium farms in Mexico. The U.S. proceeded to spray the Poppy fields with Agent Orange.***

HISTORY of OPIATES

1988 ***Opiate production in Burma increases due to the State Law and Order Restoration Council, the Burmese junta regime. The single largest heroin seizure is made in China, 2,400 pounds.***

1992 ***Colombia's drug lords introduce a high grade form of heroin in the U.S.***

1993 ***The Thai Army with support from the U.S. DEA destroyed thousands of acres of opium poppies.***

1995 ***The Golden Triangle area of Southeast Asia is the worlds leading producer of opiates, over 2,500 tons annually.***

HISTORY of OPIATES

Papaver somniferum Pod
Photo by Eric Clausen, © 2000 Erowid.org

1999 United Nations Drug Control Policy (UNDCP) estimates that 75% of the worlds opiates come from Afghanistan and that a bumper crop of over 4,600 tons exists there.

2000 Taliban leader Mullah Omar bans opiate cultivation in Afghanistan, the UNDCP confirms the ban.

Fall 2001 War in Afghanistan, opiates, primarily heroin, flood the Pakistani and world market.

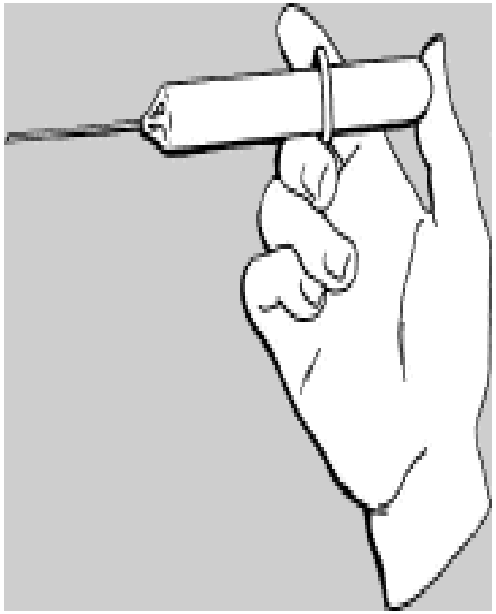
STREET NAMES

- Smack
- Mud
- Morf
- M
- Horse
- Muzzle
- Junk
- Dollies
- H
- Hairy
- Black Tar
- Hazel
- Soapium
- Poppy
- Tecata
- Chiva
- China White
- Flower

HOW ARE OPIATES CONSUMED?

Snorted **– Because of the high potency of heroin today, more and more users are snorting the drug.**

Smoked **– The method of choice for opium is smoking the tar like substance. Other opiates are often smoked on top of marijuana. This is known as *"snow capping".***



Injected **– Injecting opiates, specifically heroin, is still the choice ingestion method. Many addicts choose to inject the drug because of the quick and powerful onset of the effects. Users can inject the drug directly into the blood stream or the muscle tissue.**

Eaten **– All opiates can be consumed orally. Many prescription pain killers on the market today are opiates.**

SHORT TERM EFFECTS

- Absence of Stress
- Itchy Skin
- Impaired Vision
- Sleepiness
- Nausea/Vomiting
- Loss of Concentration
- Absence of Pain
- Constipation
- Loss of Appetite
- Altered Mental Process
- Loss of Sex Drive
- Overdose/Death

LONG TERM EFFECTS

- Severe Constipation
- Contracted Pupils
- Loss of Sex Drive
- Severe Weight Loss
- Frequent Infections
- Collapsed Veins
- Menstrual Irregularities
- Pregnancy Complications
- Immune System Damage
- Liver Damage
- Kidney Damage
- Lung Damage
- Brain Damage
- Death

OPIATE TESTING

- ***Opiates can be detected in urine up to 2-3 days after it is ingested.***

BARBITURATES

WHAT ARE BARBITURATES?

- ***Barbiturates are prescription sedatives or tranquilizers.***
- ***Barbiturates are multi-colored pills and tablets and are classified as Central Nervous System (CNS) depressants that cause drowsiness.***
- *Barbiturates are more commonly*

STREET NAMES

Barbiturates are identified on the street by the color of the pill and can be called:

- *Barbs*
- *Downers*
- *Sleepers*
- *Stumblers*
- *Rainbows*
- *Blue Heavens*
- *Yellow Jackets*
- *Red Devils*
- *Tootsies*
- *Red Dolls*

HISTORY of BARBITURATES

- ***1863 - Barbiturates were developed by Adolph von Bayer, famous for developing aspirin, and heroin.***

- ***1903 – Barbiturates were first used in medical practices. Barbital (barbitone), was used as a sedative for the chronically nervous.***

HISTORY of BARBITURATES (cont)

Since 1903:

- Over 2,000 barbiturates have been manufactured using Bayer's original formula.
- So widely used at first that they were nicknamed "wonder drugs".
- Use has been drastically reduced due to:
  - The introduction of sedative drugs prescribed to reduce anxiety such as Valium and Xanax.
  - The dangerous side effects that are associated with barbiturate use.

HOW ARE THEY TAKEN?

Barbiturates can be ingested in a variety of ways:

1) **Orally – In a pill or liquid form.**
2) **Intravenously – Injected with the use of a hypodermic needle:**
   - **Injected into the bloodstream or muscle (MAINLINING)**
   - **Injected under the skin (SKIN POPPING)**
3) **Inserted into the body via suppository.**

WHY ARE THEY USED?

- ***Barbiturates are most often consumed to get "high".***
- ***Barbiturates are used by drug users to treat the unpleasant effects of other drugs such as:***
  - ***Cocaine***
  - ***Methamphetamine***
  - ***Ecstasy***
- ***Barbiturates are prescribed to treat:***
  - ***Anxiety***
  - ***Depression***
  - ***Epilepsy***
  - ***Insomnia***
  - ***Alcohol and Other Drug (AOD) Withdrawal***

PHYSICAL EFFECTS

- Sleepiness
- Dizziness
- Nausea
- Slurred Speech
- Impaired Memory
- Impaired Judgment
- Vertigo
- Impotence
- Lack of Motivation
- Reduced Sex Drive
- Irregular Menstruation
- Breathing Disorders
- Decreased Blood Pressure

PSYCHOLOGICAL EFFECTS

- ***Mild Euphoria***
- ***Disinhibition***
- ***Anxiety Relief***
- ***Sleepiness***
- ***Memory Impairment***
- ***Loss of Coordination***
- ***Increased Irritability***
- ***Severe Paranoia***
- ***Suicidal Thoughts***

BARBITURATE TESTING

- ***Barbiturates can be detected in urine up to 2-3 days after ingestion.***

Army Substance Abuse Program

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Exam Part Three